REMARKS

Claims 1-20 are pending in the present application.

Claims 1-6 and 11-20 have been rejected.

Claims 7-10 have been objected to.

Claims 1, 5, 11-13, 16-17 and 19-20 have been amended.

Claims 1-20 remain in the case.

Reconsideration of Claims 1-20 is respectfully requested.

Amendments to the Specification

The specification has been amended to replace Attorney Docket Number P04658 with Patent Application Serial Number 09/477,876. The specification has also been amended to correct typographical errors and to add some additional references to the figures. No new matter has been added to the specification as a result of these amendments.

35 U.S.C. § 112 Antecedent Basis

The Examiner stated that there is insufficient antecedent basis for the limitation "the at least 75 channels" in Line 2 of Claim 5. The Examiner also stated that Claims 16-19 have the same problem. In response, the Applicants have amended Claims 1, 5, 13, 16-17 and 19-20 to use the term "carrier frequencies" instead of the term "channels" throughout the claims.

The Examiner also stated that there is insufficient antecedent basis for the limitation "the B field" in Line 2 of Claims 11-12. In response, the Applicants have amended Claims 11-12 to change the reference from "the B field" to "a B field" of each time slot.

Allowable Subject Matter

On Page 5 of the April 2, 2003 Office Action, the Examiner objected to Claims 7-10 as being dependent upon a rejected base claim, but noted that Claims 7-10 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

35 U.S.C. § 103(a) Obviousness

On Pages 2-4 of the April 2, 2003 Office Action, the Examiner rejected Claims 1-2, 4-6 and 13-20 under 35 U.S.C. § 103 (a) as being obvious in view of United States Patent No. 6,434,183 to *Kockmann et al.* (hereafter "*Kockmann*") in view of United States Patent No. 6,275,506 to *Fazel et al.* (hereafter "*Fazel*"). On Page 3 of the April 2, 2003 Office Action, the Examiner rejected Claim 3 as being unpatentable over *Kockmann* and *Fazel* in view of United States Patent Application No. 20020034171 to *Smith et al.* (hereafter "*Smith*"). The Applicant respectfully traverses the Examiner's rejection of these claims. The Applicant respectfully requests the Examiner to withdraw the rejection of these claims in view of the Applicant's arguments and amendments to the claims.

During *ex parte* examinations of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of non-obviousness. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 USPQ 870, 873 (Fed. Cir. 1985).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and

the reasonable expectation of success must both be found in the prior art, and not be based on an applicant's disclosure. MPEP § 2142.

The Applicant respectfully submits that the Patent Office has not established a *prima facie* case of obviousness with respect to the Applicant's invention. The Applicant directs the Examiner's attention to amended Claim 1. Amended Claim 1 contains unique and novel claim elements.

> 1. (Currently amended) A transceiving unit for wireless communications over the industrial-scientific-medical (ISM) spectrum comprising:
> (a) an RF sub-module for transceiving information in a 2.4 to 2.5 GHz band; and,
> (b) a DECT baseband processor coupled and adapted to provide time slot and frame timing to the RF sub-module such that at least seventy-five carrier frequencies between 2.4 GHz and 2.4835 GHz and a minimum hop rate of 2.5 hops per second are maintained. (Emphasis added).

The Examiner stated that "Kockmann discloses a slow hopping RF module 4 that operates when allocation of the channels from the DECT Standard are matched to the ISM band as in Fig. 4. Kockmann fails to explicitly disclose at least 75 hopping frequencies and a minimum hop rate of 2.5 hops per second." (April 2, 2003 Office Action, Pages 2-3). The Applicants agree that *Kockmann* does not explicitly disclose at least 75 hopping frequencies (now amended in the claims to read "carrier frequencies").

In fact, *Kockmann* specifically teaches away from the concept of using seventy five (75) carrier frequencies. In describing the DECT Standard *Kockmann* states "A maximum of ten different carrier frequencies (carriers) are used for transmission in the frequency range from 1.88 GHz to 1.9 GHz." (Emphasis added). (*Kockmann*, Column 1, Lines 52-54). *Kockmann* also

states "Twelve channels are transmitted successively in time on each of the ten carrier frequencies using the time-division multiplex method TDMA (Time Division Multiple Access)." (*Kockmann*, Column 1, Lines 56-58). The DECT Standard has a maximum of ten carrier frequencies.

The method disclosed in *Kockmann* uses slow hopping RF modules 4 and 5. *Kockmann* must insert an inactive time slot between the transmission of data in the active time slots. *Kockmann* states "As can be seen in FIG. 3, it is necessary to provide slow hopping RF modules in a cost effective implementation of the equipment required for radio transmission, which means that each active time slot in which data are transmitted must be followed by an inactive time slot (blind slot) in which no data can be transmitted." (Emphasis added) (*Kockmann*, Column 5, Lines10-15).

The present invention does not have this limitation. The present invention is capable of sending two consecutive frames on one of the seventy five (75) carrier frequencies, and then immediately (i.e., no inactive time slot required) sending the next two consecutive frames on one of the other seventy four (74) carrier frequencies. (Specification, Page 14, Lines 1-6).

The *Kockmann* reference does not teach, suggest or even hint at the Applicants' unique and novel claim limitations recited in the claims of the Application.

The Examiner stated that the *Fazel* reference "discloses that within the frequency hopping domain it is well known to use a minimum frequency hopping rate of 2.5 hops per second in conjunction with 79 frequencies spaced 1 MHz apart when motivated to combat indoor interference and use the ISM band (2.4 – 2.4835 GHz)." (April 2, 2003 Office Action, Page 3). The Examiner

then stated that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a minimum frequency hopping rate of 2.5 hops per second with at least 75 frequencies spaced 1.063 MHz apart in the range of 2401.122 MHz to 2479.813 MHz when integrating DECT hardware with the ISM band. (April 2, Office Action, Page 3). The Applicants respectfully traverse this assertion of the Examiner.

The *Fazel* reference refers to two distinct and different methods to overcome channel interference in indoor transmissions. "In order to overcome the aforesaid channel interference, broadband systems with band spread spectrum technology and rake receivers or else narrowband systems with equalizers can be used in local networks, for example indoor networks." (Emphasis added) (*Fazel*, Column 2, Lines 21-25). In connection with the discussion of broadband systems the *Fazel* reference states that "However, in the case of FH-SS, 79 frequencies with a bandwidth of 1 MHz each are used. The minimum frequency hopping rate (frequency change) is 2.5 hops/s." (*Fazel*, Column 2, Lines 45-47). *Fazel* does not mention combining this feature with DECT hardware or using this feature with the DECT Standard. *Fazel* does not mention how this feature could be implemented with the DECT Standard.

Fazel states that "The second known possible way of combating interference in an indoor channel is to use narrowband channels with optimal equalization." (Emphasis added) (*Fazel*, Column 2, Lines 53-55). "Such a concept is used in the so-called DECT (Digital European Cordless Telecommunication) Standard . . . ." (*Fazel*, Column 2, Lines 62-63). Therefore, *Fazel* teaches away from using a broadband method in connection with the DECT Standard.

Fazel actually uses a bandwidth that is divided into eight (8) or fourteen (14) bands. (*Fazel*, Column 6, Lines 56-67). Figure 4 of *Fazel* depicts eight (8) carrier frequencies. *Fazel* does not use seventy five (75) carrier frequencies. There is no teaching, suggestion or hint in *Fazel* to add seventy five (75) carrier frequencies to the narrowband channel method of the DECT Standard. Therefore, no motivation or incentive has been properly identified to combine the *Fazel* reference with the *Kockmann* reference.

In order to establish obviousness by combining references there must be some teaching or suggestion in the prior art to combine the references. *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 957, 43 U.S.P.Q.2d 1294, 1297 (Fed.Cir. 1997) ("It is insufficient to establish obviousness that the separate elements of an invention existed in the prior art, absent some teaching or suggestion, in the prior art, to combine the references."); *In re Rouffet*, 149 F.3d 1350, 1355-56, 47 U.S.P.Q.2d 1453, 1456 (Fed.Cir. 1998) ("When a rejection depends on a combination of prior art references, there must be some teaching, or motivation to combine the references.")

Evidence of a motivation to combine prior art references must be clear and particular if the trap of "hindsight" is to be avoided. *In re Dembiczak*, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed.Cir. 1999) (Evidence of a suggestion, teaching or motivation to combine prior art references must be "clear and particular." "Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'"). *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457 (Fed.Cir. 1998) ("[R]ejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for

piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be 'an illogical and inappropriate process by which to determine patentability.'").

The Applicants respectfully submit that the alleged motivation to combine references presented by the Examiner does not meet the legal requirement to establish a finding of *prima facie* obviousness. The Applicants respectfully submit that the alleged motivation to combine references is not clear and particular. The Applicants respectfully submit that the alleged motivation to combine references has been assumed by "hindsight" in light of the existence of the Applicants' invention.

For the reasons set forth above, the independent claims (Claim 1, Claim 13 and Claim 20) are not *prima facie* obvious. Dependent Claims 2-12 and dependent Claims 14-19 include the limitations of their respective base and intervening claims. Therefore, the Applicants respectfully submit that Claims 1-20, as amended, are patentable over the cited prior art references. The Applicants respectfully request that Claims 1-20, as amended, be allowed.

The Examiner also rejected Claim 3 as being unpatentable over *Kockmann* and *Fazel* in view of *Smith*. The Examiner stated that *Kockmann* and *Fazel* disclose all the features of Claim 3 except for a 32 bit preamble, 64 bit A-field and a 320 bit B-field and 4 bits form CRC. (April 2, 2003 Office Action, Page 4). For the reasons set forth above, the Applicants respectfully disagree that the *Kockmann* and *Fazel* references disclose all the features of Claim 3 except for a 32 bit preamble, 64 bit A-field and a 320 bit B-field and 4 bits form CRC. The Applicants respectfully submit that no proper motivation or incentive has been properly identified to combine the *Smith* reference with the *Kockmann* reference and the *Fazel* reference.

Therefore, the Applicants respectfully submit that Claims 1-20, as amended, are patentable over the cited prior art references. The Applicants respectfully request that Claims 1-20, as amended, be allowed.

The Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. The Applicants reserve the right to submit further arguments in support of his above stated position as well as the right to introduce relevant secondary considerations including long-felt but unresolved needs in the industry, failed attempts by others to invent the invention, and the like, should that become necessary.

SUMMARY

For the reasons given above, the Applicants respectfully request reconsideration and allowance of pending claims and that this Application be passed to issue. If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this Application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at ***wmunck@davismunck.com***.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to National Semiconductor Corporation Deposit Account No. 14-0448.

Respectfully submitted,

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